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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,689	08/11/2005	Jan-Erik Nilsskog	4747-4000	9868

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Locke Lord Bissell & Liddell LLP
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EXAMINER	
KHARE, ATUL P	

ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
12/03/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptopatentcommunication@lockelord.com

Office Action Summary	Application No.	Applicant(s)	
	10/520,689	NILSSKOG ET AL.	
	Examiner	Art Unit	
	ATUL KHARE	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-25* is/are rejected.

7)☒ Claim(s) *5 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed 08 September 2009 has been entered and fully considered.

2. Claims 1, 2, and 4-25 are currently pending. Claim 3 has been cancelled. Claims 18-25 are new.

3. No new matter has been found.

Claim Objections

4. Claims 5 and 25 objected to because of the following informalities: The trademark "PLATON DE 25" should be removed from the claim. A trademark or trade name does not identify or describe the goods associated with the trademark or trade name. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 2, 6, 10-17, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888).

9. As to claim 1, WISE teaches the use of a casting form for making concrete slabs whose sides have grout keys (or studs - column 1 lines 3-6). The casting form having grout keys is stripped after a first cast section has been cast (column 1 lines 39-45). An adjacent concrete slab is grouted together side by side with the concrete slab having the design formed from the grout keys (column 3 lines 54-58). The studded plate of WISE is used at the formwork close of the first cast section to provide for a method of denticulation of concrete joints as required by the claim. See also figures 1-8. WISE does not appear to explicitly disclose the stud side wall inclination angle. However,

WISE teaches that the shape of each embossing (dimple) may vary, and that the slope of the dimple should satisfy geometrical conditions to enhance stripping of the studded plate from the concrete slab (column 3 lines 45-75).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to optimize the inclination angle of the stud side wall in order to satisfy geometrical conditions and help to enhance stripping of the studded plate from the concrete slab after it has been cast (column 3 lines 45-75).

10. As to claim 2, WISE teaches that the maximum stud width can be 2.5 inches (or 63.5mm – column 4 lines 6-7), and that the adjacent dimples may be spaced apart (between the base of the stud side walls) about 1 inch (or 25.4mm – column 4 lines 30-31). This puts the maximum center distance between the studs at approximately 3.5 inches, or 88.9mm, which falls within the range required by the claim. This also puts the distance between the base of the stud side walls at about 25.4mm, which falls within the range required by the claim. WISE teaches that the depth (or height) of the dimple can be about one-fourth inch, or 6.4mm, which falls within the range required by the claim (column 4 lines 22-23).

11. As to claim 6, WISE teaches the use of dimples, or studs, that are rectangular or round (column 3 lines 49-50).

12. As to claim 10, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake

or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between cast joints in bridges, tunnels, dams, and containers as required by the claims is met by WISE since the method disclosed by WISE is capable of being used in these components.

13. As to claim 11, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between cast joints in box walls on a free balanced cantilever as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used between cast joints in box walls on a free balanced cantilever.

14. As to claim 12, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the

claim. Therefore, the use of a method of denticulation of concrete joints on site or by prefabrication of components as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used on site or by prefabrication of components.

15. As to claim 13, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between large concrete components as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used between large concrete components. WISE does not appear to explicitly disclose the stud side wall inclination angle. However, WISE teaches that the shape of each embossing (dimple) may vary, and that the slope of the dimple should satisfy geometrical conditions to enhance stripping of the studded plate from the concrete slab (column 3 lines 45-75).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to optimize the inclination angle of the stud side wall in order to satisfy geometrical conditions and help to enhance stripping of the studded plate from the concrete slab after it has been cast (column 3 lines 45-75).

16. As to claim 14, WISE teaches that the maximum stud width can be 2.5 inches (or 63.5mm – column 4 lines 6-7), and that the adjacent dimples may be spaced apart (between the base of the stud side walls) about 1 inch (or 25.4mm – column 4 lines 30-31). This puts the maximum center distance between the studs at approximately 3.5 inches, or 88.9mm, which falls within the range required by the claim. This also puts the distance between the base of the stud side walls at about 25.4mm, which falls within the range required by the claim. WISE teaches that the depth (or height) of the dimple can be about one-fourth inch, or 6.4mm, which falls within the range required by the claim (column 4 lines 22-23).

17. As to claims 15 and 16, WISE teaches that the maximum stud width can be 2.5 inches (or 63.5mm – column 4 lines 6-7), and that the adjacent dimples may be spaced apart (between the base of the stud side walls) about 1 inch (or 25.4mm – column 4 lines 30-31). This puts the maximum center distance between the studs at approximately 3.5 inches, or 88.9mm, which is slightly above the range required by the claim. This puts the distance between the base of the stud side walls at about 25.4mm, which falls within the range required by the claim. WISE teaches that the depth (or height) of the dimple can be about one-fourth inch, or 6.4mm, which is slightly lower than the range required by the claim (column 4 lines 22-23). WISE additionally teaches that the shape of the embossing (dimple) may vary (column 3 lines 47-49). The adjacent dimples may have separation between them at a desired value, depending upon engineering considerations (column 4 lines 28-29). The dimensions of grout keys with

various depths will provide for desired resistance to stresses in the final product (column 3 lines 54-58).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to modify the studded plate of WISE to achieve a center distance between the studs and a stud height that falls within the claimed ranges because the dimensions of the studs can be varied in order to optimize resistance to stresses (column 3 lines 54-58).

18. As to claim 17, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between large concrete components as required by the claim is anticipated by WISE since the method disclosed by WISE is capable of being used between large concrete components. WISE does not appear to explicitly disclose the stud side wall inclination angle. However, WISE teaches that the shape of each embossing (dimple) may vary, and that the slope of the dimple should satisfy geometrical conditions to enhance stripping of the studded plate from the concrete slab (column 3 lines 45-75).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to optimize the inclination angle of the stud side wall in

order to satisfy geometrical conditions and help to enhance stripping of the studded plate from the concrete slab after it has been cast (column 3 lines 45-75).

19. As to claims 21-24, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in the rejection of claim 1 above. WISE teaches the use of his invention to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). According to MPEP 2111.02, if a prior art structure is capable of performing the intended use of a claim, then it meets the claim. Therefore, the use of a method of denticulation of concrete joints between cast joints in bridges, tunnels, dams, and containers as required by the claims is met by WISE since the method disclosed by WISE is capable of being used in these components.

20. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888) as applied to claims 1, 2, 6, 10-17, and 21-24 above, and further in view of LEWIS (US 2,745,165). As to claim 4, WISE does not appear to explicitly disclose that the studded plate has bridges or backs between the studs. However, LEWIS teaches the use of paving dowels having a portion extending into a first-poured concrete section which is filled by a subsequently poured section (column 1 lines 20-28). The portion extending into the first-poured concrete section is formed by a key strip on a form plate which is removed after the first section is cast (see item K in figures 1-4, and

column 3 lines 25-45). This key strip has a recess (item 42 in figures 1 and 3) which is formed between two adjacent “studs” in the key strip (column 3 lines 17-19). This recess between the studs constitutes a back or bridge between the studs as required by the claim.

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to use the studded plate of WISE having the design of LEWIS including a back or bridge between the studs because this design element was known in the art and because of the additional functions that such a bridge or back can provide during the casting process, such as allowing for the incorporation of additional casting elements (column 3 lines 17-21 of LEWIS).

21. Claims 5, 7, 8, 18-20, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888) as applied to claims 1, 2, 6, 10-17, and 21-24 above, and further in view of JOHNSEN (DE 4,328,787).

22. As to claims 5 and 25, WISE does not appear to explicitly disclose that the studded plate has a shape equivalent to a PLATON DE25 plate. However, WISE teaches that the shape of the embossing (dimple), and therefore the studded plate, may vary (column 3 lines 47-49). Additionally, JOHNSEN teaches the use of a studded plate that has the exact shape of a PLATON DE25 plate (as disclosed by applicant at [0030] and figures 1 and 2) as a drainage plate (see page 2 - section titled "area covered by invention", and figure 7).

At the time of the invention, it would have been *prima facie* obvious to a person having ordinary skill in the art to use the studded plate of WISE having the design of JOHNSEN because it was known in the art that the shape of the studded plate can be varied, and because the PLATON DE25 shape is a design that has been used in arts requiring studded plates for construction purposes (see column 3 lines 47-49 of WISE and page 2 section titled "area covered by invention" of JOHNSEN).

23. As to claim 7, 18, and 19, the studded plate disclosed by JOHNSEN at figure 7 has a square diamond or polygonal pattern.

24. As to claim 8, the pattern of the studs of the studded plate used by WISE is oriented parallel to or square to the direction of the primary shear, since his invention is used to lock adjacent concrete slabs against stresses normally encountered in a building as well as stresses occurring during an earthquake or excessive ground vibration (column 1 lines 10-13). See also figures 1-8.

25. As to claim 20, the studded plate disclosed by JOHNSEN at figure 7 has studs positioned in relation to each other in a hexagonal pattern as required by the claims. For example, in a 3x4 block of studs, a hexagonal pattern is clearly present between the two center studs in rows 1 and 3 and the two outer studs in row 2.

26. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over WISE (US 3,618,888) as applied to claims 1, 2, 6, 10-17, and 21-24, and further in view of SCHERTZBERG ET AL. (US 2002/0009566). As to claim 9, WISE teaches a method of denticulation of cast concrete joints using a studded plate as a formwork as outlined in

the rejection of claim 1 above. WISE does not appear to disclose a method of denticulation using a studded plate toward the first cast section comprising a hose or string of swellable rubber that is partly cast into the first cast section. However, SCHERTZBERG teaches the use of an injection hose to fill voids during concrete construction [0002]. The injection hose is embedded in a concrete cast section in order to fill voids left in concrete joints [0004].

At the time of the invention, it would have been *prima facie* obvious a person having ordinary skill in the art to use the embedded injection hose of SCHERTBERG in the method of denticulation of concrete joints disclosed by WISE because of the need in the art to fill voids left in concrete joints during construction with materials such as epoxy ([0004] of SCHERTZBERG).

Response to Arguments

27. Applicant's arguments filed 08 September 2009 have been fully considered but they are not persuasive.

28. In response to applicant's arguments with respect to claim 1, WISE teaches that the dimple depth is a function of elevation about the bottom of the mold (column 3 lines 61-63). The slope of the dimple should satisfy required geometrical conditions (column 3 lines 70-72). Both the depth and the slope of the dimple have an effect on the inclination angle of the sidewall portion of the dimple. Thus, the depth and slope of the dimple are parameters that would affect sidewall inclination angle and are disclosed as being readily optimized to satisfy geometrical conditions. As stated in the rejection of

claim 1 above, it would therefore have been *prima facie* obvious to a person having ordinary skill in the art to optimize the inclination angle of the stud side wall to meet the claimed limitations in order to satisfy geometrical conditions and help to enhance stripping of the studded plate from the concrete slab after it has been cast (column 3 lines 45-75).

29. Additionally, applicant's arguments are drawn to differences in proportion or size, which are generally obvious to the ordinary artisan. See MPEP 2144.04. Applicant's arguments do not allege any unexpected result or criticality for the particular size or shape claimed.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ATUL KHARE whose telephone number is (571)270-7608. The examiner can normally be reached on Monday-Thursday 7:30 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ATUL KHARE/
Examiner, Art Unit 1791

/Matthew J. Daniels/
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11/20/09